DOCUMENT RESUME

ED 178 593 TM 009 797

AUTHOR	Kampe, Lynnette; Walker, Clinton B.
TITLE	Criterion-Referenced Tests and Other Objective-Based Tests.
INSTITUTION	California Univ., Los Angeles. Center for the Study of Evaluation.
REPORT NO	CSE-WP-27
PUB DATE	Jan 78
NOTE	24p.
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Criteria; *Criterion Referenced Tests; Elementary Secondary Education; *Test Reviews; *Test Selection
IDENTIFIERS	*Objective Referenced Tests; *Test Bibliographies

ABSTRACT

The Center for the Study of Evaluation (CSE) compiled a catalog of existing criterion referenced tests (CRT) and other objectives-based tests for use in kindergarten through grade 12. CSE consulted publishers' catalogs, bibliographies, and test lists, and conducted computer searches of the Educational Resources Information Center (ERIC) and Psychological Abstracts databases. Criteria for inclusion of criterion-referenced tests were: test availability; test's independence from a specific instructional program or curricular package; tests originally designed to indicate mastery or absolute level of performance; tests built on specific objectives; test items keyed to objectives; and scores provided for each objective. Excluded from the list of CRTs were tests which would have to be duplicated locally; checklists of observable behavior; developmental or customized versions of tests; and tests with only one item per objective. (There are two sets of test materials in the catalog: one listing criterion referenced tests, including title, publisher, and intended school level; and the second, listing objectives-based tests, including item banks, program-embedded tests, and custom-made CRT services. (MH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Center for the Study of Evaluation

UCLA Graduate School of Education
Los Angeles, California 90024

ED178593

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
M. Young
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CSE

CSECSE

CSECSECSE

CSECSE

CSE

TM009 797

Center for the Study of Evaluation

The mission of the Center for the Study of Evaluation is to conduct inquiry, from a variety of perspectives, into the nature of educational programs and services. Our commitment to inquiry into the field of evaluation grows from the belief that school practices and the competencies and satisfactions of those who participate in the educational enterprise can benefit from information collected in accordance with social science methodologies. Activities of CSE involve study of the instruments and methodologies for collecting information as well as the sociopolitical contexts of educational decisions as a means of contributing to the long-range growth in effectiveness of public education.

Information about CSE and its publications may be obtained by writing to:

Director, Public Information
Center for the Study of Evaluation
UCLA Graduate School of Education
Los Angeles, California 90024

24369

CRITERION-REFERENCED TESTS AND OTHER OBJECTIVES-BASED TESTS

CSE Working Paper No. 27

January 1978

Lynnette Kampe
Clinton B. Walker

Center for the Study of Evaluation
University of California, Los Angeles
Los Angeles, California 90024

The work upon which this publication is based was performed pursuant to a contract with the National Institute of Education, Department of Health, Education and Welfare. Points of view or opinions stated do not necessarily represent official NIE position or policy.

In preparing the CSE Criterion-Referenced Test Evaluations (forthcoming), CSE compiled a list of existing criterion-referenced tests (CRTs). The search and screening processes are described below and the resulting lists of CRTs and other objectives-based tests are presented.

SEARCH AND ACQUISITION

In order to find as many of the existing CRTs as possible, CSE consulted a wide variety of sources and used a broad definition of CRT during the search phase. Catalogs of hundreds of publishers were examined as were available bibliographies of tests (see references below) and test lists compiled during previous CSE projects. A retrospective and on-going computer search of ERIC was conducted using the following descriptors: criterion-referenced, mastery, objectives-based, domain-referenced, content-standard, and universe defined tests. The retrospective search covered the past ten years of Current Index to Journals in Education and Research in Education and the past five years of Psychological Abstracts. Additional publications then continued to be identified as they entered the system throughout 1976.

All leads to CRTs were pursued by a letter of inquiry and, for non-respondents, a follow-up letter. Our letters of inquiry requested information on tests which fit any of the descriptors used in the ERIC search, which were designed for any of grades K-12, and which were available to test users apart from instructional materials. We then ordered sample

materials for each test and later checked with an additional letter to ensure that we had obtained the most current and complete information to support each test. Seventy-seven commercial publishers and ninety-two non-commercial publishers (mostly school systems) were identified and contacted as possible sources of CRTs. The thoroughness of our search was cross-checked and confirmed by the responses of a national sample of 421 school district personnel, who were asked to name CRTs in use in their districts.

SCREENING OF TESTS

Tests were screened for inclusion in the book according to a set of rules which the project staff developed. The rules deal in part with whether a test is available and in part with defining a CRT. The working definition is fairly inclusive for the purpose of acquainting test users with a range of mastery-like tests, not because we advocate relaxed standares for CRTs. Our standards for evaluating CRTs for the Criterion-Referenced Test Evaluations are published as a report.*

Both commercial and non-profit (usually school district) developers' tests were included. Tests were included in this report only if they are readily available to qualified test users from the developer. Approximately 80 locally developed CRTs were excluded by this rule. Among the available tests, only the ones that can be used sensibly apart from a specific instructional program were included. Excluded by that rule are tests that are sold separately but that make reference to unique content (e.g., the history of Ohio; the stories of a single reading program). Also eliminated

*Walker, C. B. Standards for evaluating criterion-referenced tests. CSE Report No. 103. Center for the Study of Evaluation, University of California, Los Angeles, January, 1978.

were CRTs that are sold only as part of a curricular package, since those tests are selected mainly as a result of a decision about the teaching materials. Our standards for evaluating CRTs may still be applied locally to such tests as part of the process of choosing among curricular packages.

Our working definition of a CRT included tests that have all of the four following elements:

- They were originally designed to indicate mastery or absolute level of performance.
- They are built around explicit objectives (some described better than others).
- The test items are keyed to the objectives.
- Scores are provided for each objective.

The first rule excludes norm-referenced tests to which criterion-referenced interpretations have been added as an afterthought and also measures of typical performance, like attitude scales.

A handful of possible CRTs were excluded on other grounds. Materials that would have to be duplicated locally by a photocopying method were screened out. Checklists of observable behaviors were left out as were real tests of behavior that can be expected as a result of normal, unschooled development. Only production versions of tests were included, since developmental versions often do not get published. Customized CRTs were excluded because CSE did not have the resources to visit their sales locations or order custom-built tests. Tests with only one item per objective were not included on the ground that they were not serious attempts at criterion-referenced measurement. Two exceptions to this rule were made owing to the likely attention these tests will receive as a result of extensive promotion by the publisher.

Two sets of test materials are listed below. The first, entitled "Criterion-Referenced Tests," gives the title, publisher, and intended school level use for all tests which met the screening rules given above. The second listing, entitled "other Objectives-Based Tests," lists the available test materials which were screened out of the CRT list. This latter category includes item banks program - embedded tests, custom-made CRT services.

By including a test in either list we were judging only whether it seemed to be available and to have certain characteristics, not whether it was a good test. The forthcoming CSE Criterion-Referenced Test Evaluations book will contain detailed evaluations of those tests that are named in the list of CRTs and were available for examination before 1977. Readers may consult publishers' catalogs for more recent tests.

REFERENCES

Barrett, J. E. (Ed.) Where behavioral objectives exist. Norton, Mass: Project SPOKE, 1974.

Gitlin, C. Review of commercially available criterion-referenced tests. Final report, Contract No. DAJA37-75-C-1760. United States Dependents Schools, European Area. Los Angeles: Educational Objectives and Measures, February 1976.

Keller, C. M. Criterion-referenced measures: A bibliography. ERIC Clearinghouse on Tests, Measurement, and Evaluation, Princeton, N.J.: 1972 (ED 060 041, TM 001 124).

Knapp, J. A collection of criterion-referenced tests. TM Report No. 31. Princeton, New Jersey: ERIC Clearinghouse on Tests, Measurement, and Evaluation, December 1974. ED 099 427.

Rosen, P. (Ed.) Test collection bibliographies: Criterion-referenced measures. Princeton, New Jersey: Educational Testing Service, 1973. ED 104 910, TM 004 362. (Includes supplement dated August 1974.)

Rosen, P. (Ed.) Test Collection Bulletin. Princeton, New Jersey: Educational Testing Service, 1975 (Vol. 9), and 1976 (Vol. 10).

Los Angeles County Superintendent of Schools, Division of Program Evaluation, Research and Pupil Services. Test Library Catalog (Revised Edition). Los Angeles, California 1976.

Education Programs That Work. San Francisco: 1975, Far West Regional Laboratory for Educational Research and Development.

CRITERION-REFERENCED TESTS

Analysis of Skills (ASK) - Language Arts
Scholastic Testing Service
elementary & secondary

Analysis of Skills (ASK) - Mathematics
Scholastic Testing Service
elementary & secondary

Analysis of Skills (ASK) - Reading
Scholastic Testing Service.
elementary & secondary

Basic Arithmetic Skill Evaluation (BASE) &
Imperial International Learning Corp. BASE II
elementary

Beginning Assessment Test for Reading
J. B. Lippincott Company
elementary

Carver-Darby Chunked Reading Test
Revrac Publications
secondary

Cooper-McGuire Diagnostic Word
Analysis Test
Croft Educational Services
elementary

Criterion Test of Basic Skills
Academic Therapy Publications
elementary & secondary

The Design for Math Skill Development
National Computer Systems
elementary & secondary

Diagnosis: An Instructional Aid -
Mathematics
Science Research Associates
elementary

Diagnosis: An Instructional Aid -
Reading
Science Research Associates
elementary

Diagnostic Mathematics Inventory
CTB/McGraw-Hill
elementary & secondary

Diagnostic Skills Battery
Scholastic Testing Service
elementary

Doren Diagnostic Test of Word Recognition Skills
American Guidance Service
elementary

Early Childhood Assessment
Cooperative Educational Service Agency
elementary

EPIC Criterion-Referenced Test:
Basic Reading and Computational Skills
Multi-Media Associates
elementary

Everyday Skills Test
CTB/McGraw-Hill
elementary & secondary

Fountain Valley Teacher Support System
in Mathematics
Richard Zweig Associates
elementary & secondary

Fountain Valley Teacher Support System
in Reading
Richard Zweig Associates
elementary

Individual Pupil Monitoring System -
Mathematics
Houghton-Mifflin Company
elementary & secondary

Individual Pupil Monitoring System -
Reading
Houghton-Mifflin Company
elementary

Individualized Criterion-Referenced
Testing: Mathematics
Educational Progress Corporation
elementary & secondary

Individualized Criterion-Referenced
Testing: Reading
Educational Progress Corporation
elementary & secondary

Instant Word Recognition Test
Dreir Educational Systems
elementary

KeyMath Diagnostic Arithmetic Kit
American Guidance Service
elementary & secondary

Language and Thinking Program: Mastery
Learning Criterion Tests
Follett Publishing Company
elementary

Language Arts: Composition, Library
and Literary Skills
Instructional Objectives Exchange
elementary

Language Arts: Mechanics and Usage
Instructional Objectives Exchange
elementary

Language Arts: Word Forms and Syntax
Instructional Objectives Exchange
elementary

Mastery: Mathematics
Science Research Associates
elementary & secondary

Mastery: SOBAR Reading
Science Research Associates
elementary & secondary

Math Diagnostic/Placement Tests
U-Sail
elementary

Math Management System Diagnostic
Step Tests
Clark County School District
elementary

Mathematics: Elements, Symbolism,
and Measurement
Instructional Objectives Exchange
secondary

Mathematics: Geometry
Instructional Objectives Exchange
elementary

Mathematics: Geometry, Operations, and Relations
Instructional Objectives Exchange
elementary

Mathematics: Measurement
Instructional Objectives Exchange
elementary

Mathematics: Numeration and Relations
Instructional Objectives Exchange
elementary

Mathematics: Operations and Properties
Instructional Objectives Exchange
elementary

Mathematics: Sets and Numbers
Instructional Objectives Exchange
elementary

McGuire-Bumpus Diagnostic Comprehension Test
Croft Educational Services
elementary

New Mexico Career Education Tests
Monitor
secondary

New Mexico Concepts of Ecology Test
Monitor
elementary & secondary

New Mexico Consumer Tests
Monitor
secondary

Pre-Reading Assessment Kit
CTB/McGraw-Hill
elementary

Prescriptive Reading Inventory
CTB/McGraw-Hill
elementary

Reading: Comprehension Skills
Instructional Objectives Exchange
elementary

Reading: Word Attack Skills
Instructional Objectives Exchange
elementary

REAL: Reading/Everyday Activities in Life
Cal Press
secondary

Senior High Assessment of Reading Performance (SHARP)
CTB/McGraw-Hill
secondary

Sipay Word Analysis Tests
Educators Publishing Service
elementary & secondary

Skills Monitoring System - Reading
Harcourt Brace Jovanovich/Psychological Corp.
elementary

Social Studies: American Government
Instructional Objectives Exchange
secondary

SRA Survival Skills in Reading & Mathematics
Science Research Associates
elementary & secondary

Stanford Diagnostic Mathematics Test
Harcourt Brace Jovanovich
elementary & secondary

Stanford Diagnostic Reading Test
Harcourt Brace Jovanovich
elementary & secondary

Survey of Reading Skills
Dallas Independent School District
elementary & secondary

Tests of Achievement in Basic Skills: Mathematics
Educational & Industrial Testing Service
elementary & secondary

Tests of Achievement in Basic Skills: Reading and Language
Educational & Industrial Testing Service
elementary

Wisconsin Design for Reading Skill
Development: Comprehension
National Computer Systems
elementary

Wisconsin Design for Reading Skill
Development: Study Skills
National Computer Systems
elementary & secondary

Wisconsin Design for Reading Skill
Development: Word Attack
National Computer Systems
elementary

Woodcock Reading Mastery Tests
American Guidance Service
elementary & secondary

Other Objectives-Based Tests

A. Uncopyrighted Banks of Objectives-Based Test Items

Behavioral Objectives and Criterion-Referenced Test Items in Mathematics, K-6

Uniondale Public Schools, Uniondale Union Free School District, Uniondale, New York 11553.

For each of the grades, there are two pamphlets, one with 80 or more objectives, the other with an item bank for testing those objectives.

Behavioral Objectives and Test Items:

Language Arts	(ERIC numbers ED 066 498 through 501)
Mathematics	(ERIC numbers ED 066 494 through 497)
Social	(ERIC numbers ED 066 502 through 504)
Science	(ERIC numbers ED 066 505 through 508)

Institute for Educational Research, 1400 W. Maple Ave., Downers Grove, Illinois 60515.

A bank of approximately 5,000 objectives and 27,000 accompanying test items written by Chicago elementary and secondary school teachers in the course of their participation in workshops in the writing of behavioral objectives and test items. Objectives and items in each of the four content areas are available for primary, intermediate, junior high, and high school levels. A volume on measuring students' attitudes (ED 066 493) and an operational guide to the workshops (ED 066 492) are also available. Parts of the materials are also available through the Items and Objectives Co-op, listed below.

Behavioral Objectives Curriculum Guide, Mathematics, Grade 7

Bucks County Public Schools, Routes #611 and #313, Doylestown, Pennsylvania 18901.

A framework for the development of a seventh grade mathematics program. The guide includes over 160 behavioral objectives with an assessment item and estimated learning time for each objective at three levels of difficulty.

Individualizing Mathematical Learning in the Elementary Schools:

An Ordered List of Mathematical Objectives, K-8
Test Items for Primary Mathematics
Test Items for Intermediate Mathematics

CCL Document Service, 1025 W. Johnson St., Madison, Wisconsin 53706

Approximately 200 mathematics objectives and 400 to 500 sample test items keyed to the objectives. The items and objectives were developed at the Wisconsin Research and Development Center at the University of Wisconsin in cooperation with the Wisconsin Department of Public Instruction. Although the test items have been out-of-print since mid-1976, single copies will be made upon request.

Junior High Unified: Sequencing and Keying of Unified Studies; Test Specifications for Criterion-Referenced Testing; Achievement-Awareness Record for Language Arts. ERIC Document 116 193.

ERIC Document Reproduction Service, P.O. Box 190, Arlington, Virginia 22210.

A language arts curriculum guide for grades 7-9 developed by the Shawnee Mission (Kansas) School District. It includes 50 objectives with sample test items on composition. Objectives without sample test items are given in the following areas (number of objectives in parenthesis): syntax (81), listening and viewing (20), literature and reading (24), and speaking (18).

Managing Reading by Objectives

El Dorado County Office of Education (Attn: Curriculum Clerk)
337 Placerville Drive
Placerville, CA 95667

A reading skills management system developed by teachers and district staff in El Dorado County, California. This 1971 edition is a revision that was based on teachers' classroom experience with the system. The biggest component is a bank of over 10,000 items keyed to over 600 objectives in the following four skill categories: language development (oral and written language, vocabulary), word analysis (sight words, phonics, morphology), comprehension (ten types), and study skills (twelve subareas). Items are divided into eleven levels from pre-reading through grade 8.

Many of the individual tests will have to be recopied before duplicating, for example, where fill-in items are already filled-in with the correct answer. Single copies of the item bank are sold as well as the optional resources for a complete testing and accountability system listed below. The manual includes informal measures for diagnosis.

Mathematics Assessment Process Handbook of Objectives, K-9, 1973-74.

Greece Central School District, Greece, New York 14616. Available for the Clearinghouse for Applied Performance Testing, Northwest Regional Educational Lab., 710 S.W. Second Ave., Portland, Oregon 97204.

Described as a minimum skill component of the total district mathematics curriculum, it contains guidance on classroom management plus over 200 mathematics objectives, each with a sample item.

The Objectives and Items CO-OP:

Language Arts
Mathematics
Social Studies
Science
Vocational Education

The CO-OP, 413 Hills House North, University of Massachusetts, Amherst, Massachusetts 01002.

The CO-OP has collected over 10,000 objectives and 40,000 items for elementary and secondary school levels in 47 booklets developed by a number of school systems and state education department for their own use. For example, the mathematics materials include those of Project SPPED developed for the New York State Education Department. These booklets are described as varying in comprehension and have not been edited by the CO-OP.

Phoenix Minimal Objectives:

Minimal Mathematics Objectives, K-12, 1975
Proposed Minimal Reading Objectives, K-12, 1974
Proposed Minimal Writing Objectives, K-12, 1974

Curriculum and Instructional Development Services, Greater Phoenix Curriculum Council, 2526 W. Osborn Rd., Phoenix, Arizona 85017.

Over 300 basic skill objectives, each with one or more sample items or suggestions for the writing of assessment items or tasks. Broad performance tasks, involving several skills, are frequently suggested to evaluate mastery of writing objectives. In 1976 a revision of these materials was in progress.

B. Tests that may be CRTs but which were not available in time to include in the book.

Basic Mathematics Criterion-Referenced Test
Multi-Media Associates, Inc.

Basic Reading Criterion-Referenced Test
Multi-Media Associates, Inc.

Brigance Diagnostic Inventory of Basic Skills
Walker Educational Book Corporation

Criterion-Referenced Tests for Reading and Writing, in
A Technology of Reading and Writing, Vol. 2. N.Y. Academic Press, 1977

Language Arts Criterion-Referenced Survey Test
Multi-Media Associates, Inc.

1976 Metropolitan Achievement Tests
Psychological Corporation

Mathematics Criterion-Referenced Survey Test
Multi-Media Associates, Inc.

C. Possible CRTs that are embedded in a specific curriculum

Clues to Reading Progress
Educational Progress Corporation

Communication Skills Programs
Ginn and Company

Competency Skills Test for Keys to Reading
Economy Company

Continuous Porgress Laboratories
Educational Progress Corporation

Criterion Assessment Tests
J. B. Lippincott

Dale Avenue Project
Paterson (N.J.) School District

Developing Mathematical Processes
Rand McNally

Developmental Syntax Program
Learning Concepts

Gaining Math Skills
McCormick Mathers Publishing Company

Holt Basic Reading System
Holt, Rinehart, Winston

Individualized Mathematics Program
Educational & Industrial Testing Service

Individualized Mathematics System
Ginn and Company

Individualized Science Program CRTs
Imperial International Learning Corporation

Learning Staircase
Learning Concepts

Mathematics Around Us
Scott Foresman & Company

Mathematics Laboratory
McCormick Mathers

Math Management System Placement Test
Clark County School District

Perceptual Skills Curriculum
Walker Educational Book Company

Project ACTIVE CRTs
ACTIVE, Ocean Township (N.J.) Elementary School

Progressive Achievement Tests
New Zealand Council for Educational Research

Series r: Macmillan Reading
Macmillan Company

Series m: Macmillan Math
Macmillan Company

System 80
Borg-Warner Educational Systems

Teaching Essential Language & Reading
Educational & Industrial Testing Service

System for Teacher Evaluation of Prereading Skills
CTB/McGraw-Hill

SWRL Kindergarten Program
Ginn and Company

D. Names and publishers of made-to-order CRTs

Comprehensive Achievement Monitoring (CAM)
National Evaluation Systems

Customized Objective Monitoring Service
Houghton-Mifflin Company

IOX Test Development Service
Instructional Objectives Exchange

Mastery Custom Tests - Reading and Math
Science Research Associates

ORBIT
CTB/McGraw-Hill

E. Tests received in response to our search, but screened out of the pool of tests to be reviewed

Listed below are the names and publishers of tests which were examined and screened out. The reasons for excluding each are given, keyed to the following list:

1. Became unavailable before publication of this volume
2. The skills measured are a usual result of maturation or general experience
3. Not built around explicit objectives
4. Items are not keyed to objectives
5. There is only one item per objective
6. Scores for the separate objectives are not given
7. Scores are not interpreted in terms of proficiency or mastery
8. The test was not originally designed as an objectives-based type measure

No judgment about the merits of these tests is intended by their being excluded, except for use as criterion-referenced measures.

ACER Class Achievement Tests
in Mathematics (3,8)
Australian Council for Educational
Research

APPEL Test (1)
Insgroup (formerly EDCODYNE)

Assessment of Career Development (8)
American College Testing Program

Basic School Skills Inventory (5,7)
Follett Publishing Company

Boehm Test of Basic Concepts (3 or
5,8)
Psychological Corporation

Cincinnati Mathematics Inventory (5)
Cincinnati Public Schools, Dept. of
Research and Development

Composite Auditory Perception
Test (8)
Alameda County (Ca.) School Department

Delco Readiness Test (3,7)
Walter M. Rhoades

Development Test of Visual Motor
Integration (2,8)
Follett Publishing Company

Emporia State Algebra II Test (5,8)
Bureau of Educational Measurements
Emporia Kansas State College

Individual Phonics Criterion Test (5,7)
Dreier Educational Systems

Kraner Preschool Math Inventory (3)
Learning Concepts

NM Attitude Toward Work Test (7)
Monitor

Oral Reading Criterion Test (3,8)
Dreier Educational Systems

PIRAMID (1)
PIRAMID Consortium

Preschool Attainment Record (5)
American Guidance Service

Prescriptive Mathematics Inventory (1)
CTB/McGraw-Hill

Reading Management System, Diagnostic
Step Tests (4,5,6)
Clark County School District

Reading Skills Survey Tests (5,6)
Economy Company

Self-Directed, Interpretative and
Creative Reading (4,6)
National Computer Systems

SRA Reading Record (8)
Science Research Associates

Stanford Achievement Test (8)
Harcourt Brace Jovanovich

Stanford Test of Academic Skills
(TASK) (8)
Harcourt Brace Jovanovich

Visual Analysis Test (8)
University of Pittsburgh